**Final Results for Regression Models**

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| --- | --- | --- | --- | --- |
| Model | J train | J validation | J Test | R2 Test |
| Linear (n=11) | 359164 | 458620 | 357622 | 0.152935 |
| Quadratic (n=22) | 232558 | 300062 | 379836 | 0.061932 |
| **Cubic (n=33)** | **212076** | **201788** | **246200** | **-0.117580** |

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| Final W (weights) for linear (n=11) training set: | Final W (weights) for quadratic (n=22) training set: | **Final W (weights) for cubic (n=33) training set:** |
| x0: 1558.1565759452642  x1: 558.3326040151551  x2: 2072.672231927536  x3: -57.196850101590826  x4: -720.9401432127361  x5: 62.60279655479553  x6: 17.994652374765792  x7: -627.9394830386063  x8: 2002.7584080886445  x9: 3328.0895588603016  x10: -644.4322547712945  x11: -2910.015563242807 | x0: -4416.306986320531  x1: 1048.5061721801176  x2: -112.18985918859835  x3: 989.2785036551941  x4: 989.2785038773145  x5: 193.35391541419085  x6: -17.41468758432893  x7: -51.967379398003686  x8: -51.967379358567996  x9: 126.03809908032417  x10: -10.977079044896527  x11: -34.763590228161775  x12: -34.7635902352049  x13: 1156.4612937067577  x14: -488.4429999615677  x15: 42179.36409646273  x16: -30654.15556421876  x17: -25464.40926757455  x18: 17215.888242572546  x19: 5014.8490949664265  x20: -5654.550200023688  x21: 1959.7443404733203  x22: -14595.141171239316 | **x0: 913.9543865714222**  **x1: 959.3705521672964**  **x2: -125.79328193515539**  **x3: 4.4640929638408124**  **x4: 642.5279877291978**  **x5: 642.5472293265921**  **x6: 642.5419009346006**  **x7: 363.4855121630244**  **x8: -64.12316887354245**  **x9: 3.064182069738308**  **x10: -160.76299635285977**  **x11: -160.76422576591722**  **x12: -160.76399414308253**  **x13: 118.2399894639384**  **x14: -18.16516704665264**  **x15: 1.9887220487416926**  **x16: 50.945779177796794**  **x17: 50.94579015605268**  **x18: 50.945790115976706**  **x19: 497.12449252139777**  **x20: -20.28842258360237**  **x21: -106.31253331899643**  **x22: -11442.683738708496**  **x23: 61210.6277282238**  **x24: -55495.62842810154**  **x25: -7191.305538356304**  **x26: 8643.592270493507**  **x27: -1534.1144424676895**  **x28: 3040.514221115038**  **x29: -4661.990308262408**  **x30: 396.5682157892734**  **x31: -754.5043132412247**  **x32: -8111.20893734321**  **x33: 12.28631935500016** |